

## HOUSING UNIT ESTIMATES FOR HAWAII, 1970-1987

Hawaii's housing stock stood at 378,519 units as of April 1, 1987, according to the most recent annual estimates prepared by the Department of Business and Economic Development. This total represented an increase of 2.2 percent over the preceding year, 13.2 percent since the 1980 census, and 74.6 percent since 1970. The 1986-1987 increase was 7,971 housing units, compared with 6,112 the preceding year.

Only 41.5 percent of the 1987 stock was owner occupied, with almost one-fourth of those units on leased land. Private renter occupied or vacant units accounted for 51.6 percent of the total, and governmental housing (most of it on military bases) made up the remaining 7.0 percent.

Growth during the past year was greatest for owner occupied housing on land owned in fee simple, up by 3.4 percent. The number of private rental units increased 1.9 percent, owner occupied units on leased land grew by 0.4 percent, and government housing rose by 0.6 percent.

By counties, the most rapid increase was recorded in Maui County, with a one-year rise of 4.9 percent. Hawaii County was second, at 4.3 percent, followed by Kauai, at 2.6 percent. The Oahu inventory rose by only 1.4 percent.

Much of the increase in the housing stock is attributable to growth in the number of condominium units in rental pools intended for transient occupancy. Statewide, such housing accounted for 21,896 units early in 1987, or 5.8 percent of the total stock. These nonresident units increased by 88.2 percent in the seven years since the 1980 census, compared with a growth rate of only 10.5 percent for the rest of the inventory.

The U.S. Bureau of the Census has estimated that Hawaii had 336,000 households (or occupied housing units) as of July 1, 1986. The corresponding figure for the total resident housing stock on April 1, 1986 was 347,549 units. It thus appears that fewer than 12,000 units were vacant, and that the gross resident vacancy rate was an exceptionally low 3.3 percent. Between 1980 and 1986, the increase in resident units was only 7.7 percent, compared with a 10.9 percent growth in total housing stock, 10.1 percent in resident population, and 14.3 percent in households.

These estimates clearly show that residential construction has failed to match growth in the number of households. Not only has population continued to increase rapidly, but the long-term decline in average household size (from 3.59 in 1970 to 3.15 in 1980 and 3.04 in 1986) has compounded Hawaii's housing problem by requiring more units to serve even a stable population. These trends are particularly evident on Oahu and Maui, where increases in resident population have outrun growth in the housing supply by the widest margins. It should be added that the problem is not with total residential construction, which has indeed kept pace with population growth; rather, shortages have occurred because so much of the added inventory has been used for nonresident occupancy, leaving increases in the resident stock at very modest levels.

Homeownership statistics present a less discouraging picture. In 1980, Hawaii ranked second-last among the 50 States in percent of housing units found to be owner occupied. At the same time, many of the homeowners lived on leased land. Both of these attributes were matters of concern to many analysts. Since 1980, however, the proportion of owner occupied units on fee simple land has noticeably improved, from 30.1 to 32.0 percent of the total stock. During the same seven-year period, owner occupied units on leased land have declined in relative terms, from 11.1 to 9.5 percent of the inventory, with total homeownership rates rising slightly, from 41.1 percent to 41.5. Part of this decline in leasehold housing may be attributable to the State Land Reform Act, which was responsible for the conversion of 7,366 lots to fee simple ownership during the 1976-1986 decade. Government housing meanwhile has fallen, from 7.7 percent to 7.0. Private rental housing, 51.6 percent of all units in 1987, has kept its share of the total with little change for a number of years.

#### Definitions and methodology

The estimates reported here were based on the 1970 and 1980 censuses of housing, annual building permit data from county building departments, and information supplied by government agencies providing housing, chiefly the armed forces and Hawaii Housing Authority. The annual estimates for 1971-1979 have been revised to make them consistent with results of the 1980 census. 1/

The U.S. Bureau of the Census has defined a housing unit as a house, an apartment, a group of rooms, or a single room, occupied as separate living quarters, or if vacant, intended for occupancy. Separate living quarters are those in which the occupants live and eat separately from other persons in the building and have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. Both occupied and vacant housing units are included in the housing inventory, except that tents, boats, vans, and the like are included only if they are occupied. Condominium units are included even if occupied by tourists or other nonresidents, but regular hotel units are generally counted only if occupied by persons who consider such units their usual place of residence.

Annual changes in the stock of private housing were estimated from building and demolition permit figures supplied by county building departments, as lagged to reflect the average interval between issuance of permit and completion of construction or razing, and transfers to or from government ownership. It was assumed that nine months elapsed,

1/ For further information on the 1971-1979 estimates, see DPED Statistical Report 156, Housing Unit Estimates for Hawaii, 1970-1982 (July 28, 1982).

on the average, between the authorization and completion dates of a structure with three or more housing units. For one- or two-unit structures and all demolitions, a three-month lag was assumed. Although these lags may be unrealistically short for the large single-family subdivisions and high-rise apartment structures that made up a large part

of the construction boom early in the 1970s, lengthening them would have a relatively modest effect on the annual totals for the housing inventory. The annual changes in government housing units were obtained from the agencies in charge of such units, and reflected actual (rather than assumed) completion dates. These data on the reported components of change in the private and public inventory indicated a Statewide net intercensal (1970-1980) increase of 119,779 housing units, compared with an actual growth (as shown by the census) of 117,477. To assure consistency with the census results, the annual data on net change by counties for 1971-1979 were adjusted by the ratios of actual to reported change. These adjustment factors ranged from 0.849 (for Kauai) to 1.015 (for Maui County). No adjustment factors were applied to data after 1980. It should be noted that annual counts of the standing government inventory indicated a 12-month 1986-1987 net increase of 166 units, while data submitted on the components of change added to a net gain of 300 units.

Detailed statistics appear in the following tables. Table 1 presents annual estimates of the total housing inventory, 1970-1987, corresponding data from the Hawaii State Department of Taxation and Honolulu Department of Finance on owner occupied units, and data from government agencies on units under public jurisdiction. Annual intercensal and postcensal estimates of total units by counties appear in table 2. Table 3 contains figures from the Hawaii Visitors Bureau on condominium units in rental pools for transient use, and also on the remainder of the housing stock by counties. Estimates for recent years, by tenure and control by county, are given in table 4. Table 5 presents building permit statistics by counties, and tables 6 and 7 contain data on the components of change in the inventory. Government units are listed in table 8. Table 9 compares housing trends, 1980-1986, with corresponding trends in population and households.

Intercensal estimates for the years before 1970 have been calculated by the Honolulu Redevelopment Agency and cited in Historical Statistics of Hawaii. 2/

The present estimates were made as part of an annual review of changes in the housing supply in Hawaii, initiated by the Honolulu Redevelopment Agency early in 1954 and extended at that time back to 1940. In the past decade these estimates have been prepared by the Hawaii State Department of Business and Economic Development, primarily from data provided by the armed forces, County building departments, Hawaii Housing Authority, and other Federal, State and County agencies. The assistance of these agencies is gratefully acknowledged.

2/ Honolulu Redevelopment Agency, "Intercensal Estimates of Dwelling Units, 1940-1960," Redevelopment and Housing Research, No. 24, July 1964, pp. 23-31, and "Intercensal Estimates of Housing Units, 1960-1970," Redevelopment and Housing Research, No. 31, July 1971, pp. 13-17; Robert C. Schmitt, Historical Statistics of Hawaii (The University Press of Hawaii, 1977), tables 15.5 and 15.7.

Table 1.-- TENURE AND CONTROL OF HOUSING: 1970 TO 1987

[Condominium units occupied or intended for occupancy by nonresidents are included in these estimates]

Year	All housing units 1/	Owner occupied units 2/ *****		Renter occupied and vacant units *****		
		Land owned	Land leased	Private 3/	Federal 4/	State and County 4/
1970 ...	216,774	68,422	20,802	106,821	14,439	6,290
1971 ...	228,749	72,086	21,732	113,531	15,089	6,311
1972 ...	238,770	75,939	24,565	117,111	14,959	6,196
1973 ...	250,742	78,878	26,776	123,934	15,071	6,083
1974 ...	266,828	82,494	30,333	131,368	16,373	6,260
1975 ...	284,120	85,264	30,543	145,276	16,386	6,651
1976 ...	298,339	88,284	33,730	152,578	17,225	6,522
1977 ...	306,989	89,980	34,549	158,223	17,493	6,744
1978 ...	315,513	92,989	35,869	161,728	18,653	6,274
1979 ...	324,261	96,273	36,540	165,045	19,022	7,381
1980 ...	334,235	100,478	36,986	170,963	19,437	6,371
1981 ...	342,873	104,677	37,413	174,753	19,427	6,603
1982 ...	348,980	106,147	37,372	179,579	19,392	6,490
1983 ...	353,414	108,761	35,586	183,249	19,304	6,514
1984 ...	359,107	111,767	35,545	185,657	19,294	6,844
1985 ...	364,436	114,548	35,681	187,905	19,280	7,022
1986 5/	370,548	117,090	35,811	191,475	19,264	6,908
1987 ...	378,519	121,019	35,959	195,203	19,265	7,073

1/ As of April 1.

2/ As indicated by the number of taxpayers claiming home exemptions. The number of owner occupied housing units reported by the U.S. Census of Housing is somewhat higher than the corresponding number based on taxpayer home exemptions, chiefly because of differences in definitions. Data for 1977-1987 refer to January 1; data for 1970-1976, to July 1.

3/ Calculated as a residual after accounting for the known components, some of which pertain to dates other than April 1, and thus not attributable to any specific date.

4/ As of April 1. Data include housing units leased from private owners.

5/ Revised.

Source: Present report.

Table 2.-- HOUSING UNITS STANDING, BY COUNTIES: 1970 TO 1987

[As of April 1. Condominium units occupied or intended for occupancy  
by nonresidents are included in these estimates]

Year	State total	City and County of Honolulu	Other counties *****			
			Total	Hawaii	Kauai	Maui
1970 ...	216,774	174,742	42,032	18,972	9,021	14,039
1971 ...	228,749	184,101	44,648	20,061	9,298	15,289
1972 ...	238,770	190,973	47,797	21,648	9,555	16,594
1973 ...	250,742	198,970	51,772	23,578	10,092	18,102
1974 ...	266,828	210,940	55,888	25,282	10,700	19,906
1975 ...	284,120	223,647	60,473	26,694	11,347	22,432
1976 ...	298,339	232,669	65,670	28,131	11,934	25,605
1977 ...	306,989	237,571	69,418	29,453	12,433	27,532
1978 ...	315,513	243,103	72,410	30,579	12,841	28,990
1979 ...	324,261	247,465	76,796	32,283	13,610	30,903
1980 ..	334,235	252,038	82,197	34,215	14,828	33,154
1981 ..	342,873	254,969	87,904	36,180	16,314	35,410
1982 ...	348,980	256,967	92,013	37,738	17,081	37,194
1983 ...	353,414	259,574	93,840	38,702	16,937	38,201
1984 ...	359,107	262,902	96,205	39,762	17,539	38,904
1985 ...	364,436	266,127	98,309	40,820	17,979	39,510
1986 1/	370,548	269,390	101,158	41,944	18,446	40,768
1987 ...	378,519	273,054	105,465	43,756	18,929	42,780

1/ Revised.

Source: Present report.

Table 3.-- RESIDENT AND NONRESIDENT HOUSING UNITS, BY COUNTIES:  
1977 TO 1987

Category and year	State total	City and County of Honolulu	Other counties			
			***** Total	Hawaii	Kauai	Maui
RESIDENT 1/						
1977 .....	301,904	237,059	64,845	29,123	11,843	23,879
1978 .....	308,444	241,573	66,871	30,008	12,062	24,801
1979 .....	315,728	245,101	70,627	31,548	12,623	26,456
1980 .....	322,598	247,152	75,446	33,594	13,395	28,457
1981 .....	328,679	249,330	79,349	34,921	14,458	29,970
1982 .....	334,580	251,280	83,300	36,254	15,402	31,644
1983 .....	340,001	254,827	85,174	36,933	15,931	32,310
1984 .....	341,505	256,015	85,490	37,860	15,941	31,689
1985 .....	342,632	257,111	85,521	38,541	15,903	31,077
1986 2/ .....	347,549	259,552	87,997	39,892	15,872	32,233
1987 .....	356,623	263,818	92,805	41,654	16,298	34,853



State total .....	378,519	121,019	35,959	195,203	19,265	7,073
C & C. of Honolulu	273,054	82,728	33,656	132,213	19,135	5,322
County of Hawaii	43,756	18,704	1,241	22,795	50	966
County of Kauai	18,929	7,002	273	11,260	65	329
County of Maui	42,780	12,585	789	28,935	15	456

1/ As of April 1.

2/ As indicated by the number of taxpayers claiming home exemptions, as of January 1.

3/ Data for both Federal and State agencies include housing units leased by these agencies from private owners. All data are as of April 1.

4/ Calculated as a residual after accounting for the known components, some of which pertain to dates other than April 1, and thus are not attributable to any specific date.

Source: Owner occupied units from Honolulu Department of Finance, Property Technical Office; total and renter occupied and vacant units from DPED Statistical Report 191, table 4, as revised, and present study.

Table 5.-- PRIVATE RESIDENTIAL CONSTRUCTION AND DEMOLITION AUTHORIZED BY PERMITS, BY COUNTIES: 1982 TO 1986

Category and year authorized	State total	City and County of Hono- lulu	Other counties			
			***** Total	Hawaii	Kauai	Maui
New 1-family dwellings:						
1982 .....	2,451	891	1,560	800	230	530
1983 .....	3,387	1,562	1,825	880	398	547
1984 .....	4,117	2,197	1,920	900	382	638
1985 .....	4,663	2,313	2,350	979	387	984
1986 .....	4,985	2,024	2,961	1,127	417	1,417
New duplex units:						
1982 .....	32	-	-	-	-	-
1983 .....	138	60	78	58	6	14
1984 .....	146	112	34	28	4	2
1985 .....	208	112	96	64	-	32
1986 .....	166	112	54	18	2	34
New apartments:						
1982 .....	3,038	2,553	485	245	118	122
1983 .....	1,341	1,220	121	38	73	10
1984 .....	1,134	942	192	153	35	4
1985 .....	2,388	1,744	644	129	84	431
1986 .....	3,813	2,076	1,737	1,265	-	472
Units demolished:						
1982 1/ .....	568	443	125	34	1	90
1983 2/ .....	505	385	120	54	4	62
1984 .....	528	429	99	50	5	44
1985 3/ .....	555	455	100	38	12	50
1986 4/ .....	690	534	156	43	60	53

1/ Data exclude housing units destroyed by Hurricane Iwa on November 23-24, 1982 (127 in the City and County of Honolulu and 543 in the County of Kauai).

2/ Excludes 16 structures destroyed by volcanic activity in Hawaii County.

3/ Excludes 11 homes in Hilo destroyed by high winds, February 16, 1986.

4/ Excludes 14 structures destroyed by volcanic activity and 1 by high winds, all in Hawaii County.

Source: Compiled from County building departments by the Hawaii State Department of Business and Economic Development.

Table 6. COMPONENTS OF CHANGE IN THE HOUSING INVENTORY, BY CONTROL AND COUNTY:  
APRIL 1, 1985 TO MARCH 31, 1986

[Revised]

County and control	New housing units built *****					
	In 1-unit struc- tures	In 2-unit struc- tures	In multi- unit struc- tures	Housing units con- verted 1/	Housing units demo- lished	Housing units trans- ferred 2/
State total .....	4,757	220	1,829	81	583	-
City & County of Honol....	2,383	124	1,364	-	471	-
Private 3/ .....	2,313	112	1,343	(NA)	455	+20
Armed forces .....	-	-	-	-	4	-
Education .....	-	-	-	-	2	-
Hon. Hsg. & Comm. Devel.	70	-	2	-	10	-20
Unspec. State agency ...	-	12	19	-	-	-
Hawaii County .....	979	64	189	30	49	-
Private 3/ .....	979	64	141	30	49	-
HHA rental .....	-	-	48	-	-	-
HHA teachers .....	-	-	-	-	-	-5
Land & Natural Resources	-	-	-	-	-	-1
Unspec. gov't. agency ..	-	-	-	-	-	+6
Kauai County .....	387	-	59	33	13	-
Private 3/ .....	387	-	59	33	12	-3
Fish & Wildlife .....	-	-	-	-	-	+1
Education .....	-	-	-	-	1	-
Kauai Hsg. Agency .....	-	-	-	-	-	+2
Maui County .....	1,008	32	217	18	50	-
Private 3/ .....	984	32	217	18	50	+79
FAA .....	-	-	-	-	-	-13
Maui Dept. of Human						



Concerns .....	24	-	-	-	-	-71
Unspec. gov't. agency ..	-	-	-	-	-	+5

NA Not available.

1/ Number added less number deleted.

2/ Net gain (+) or loss (-) by purchase, sale, donation, or lease. There were units in interagency transfers in which the receiving agency was not identified.

3/ Based on building permit data, allowing nine months for completion of units in multi-unit structures and three months for all other activity.

Source: Present study.

Table 7. COMPONENTS OF CHANGE IN THE HOUSING INVENTORY, BY CONTROL AND COUNTY:  
APRIL 1, 1986 TO MARCH 31, 1987

County and control	New housing units built *****					
	In 1-unit struc- tures	In 2-unit struc- tures	In multi- unit struc- tures	Housing units con- verted 1/	Housing units demo- lished	Housing units trans- ferred 2/
State total .....	5,346	174	3,209	+98	722	-
City & County of Hono...	2,246	112	1,999	+7	545	-
Private 3/ .....	2,024	112	1,910	(NA) 534	-17	
Armed forces .....	-	-	-	+7	6	-
HHA rental .....	-	-	-	-	-	+17
Hon. Hsg. & Comm. Devel.	222	-	89	-	5	-
Hawaii County .....	1,137	18	697	+18	58	-
Private 3/ .....	1,127	18	697	+18	58	-
Office of Housing and Community Development	10	-	-	-	-	-
Kauai County .....	426	2	42	+73	60	-
Private 3/ .....	417	2	42	+73	60	+9
Kauai Hsg. Agency ....	9	-	-	-	-	-9
Maui County .....	1,537	42	471	-	59	-
Private 3/ .....	1,417	34	451	(NA) 53	+176	
Maui Department of Human Concerns .....	120	8	20	-	6	-176

NA Not available.

1/ Number added less number deleted.

2/ Net gain (+) or loss (-) by purchase, sale, donation, or lease. There were units in interagency transfers in which the receiving agency was not identified.

3/ Based on building permit data, allowing nine months for completion of units in multi-unit structures and three months for all other activity.

Source: Present study.

Table 8.-- HOUSING UNITS OWNED OR OPERATED BY GOVERNMENT AGENCIES, BY COUNTIES:  
APRIL 1, 1987

Governmental unit or type of housing	State total	City and County of Honolulu	Hawaii County	Kalawao County	Kauai County	Maui County
All agencies .....	26,338	24,457	1,016	116	394	355
Federal government .....	19,265	19,135	50	2	65	13
Armed forces:						
Air Force .....	2,953	2,953	-	-	-	-
Army .....	7,129	7,123	6	-	-	-
Coast Guard .....	315	291	12	-	6	6
Navy and Marine Corps ...	8,814	8,758	-	-	56	-
Civilian agencies:						
East-West Center .....	3	3	-	-	-	-
Fish & Wildlife Service .	5	2	-	-	3	-
National Park Service ...	40	-	32	2	-	6
National Weather Service	5	5	-	-	-	-
Soil Conservation Service	1	-	-	-	-	1
State government .....	6,370	4,871	874	114	325	186
Education .....	27	27	-	-	-	-
Hawaii Housing Authority:						
Rental .....	5,930	4,658	834	-	296	142
Teachers housing 1/ .....	15	-	5	-	-	10
Health .....	177	20	20	114	5	18
Land & Natural Resources ..	97	55	9	-	22	11
Social Services, exc. HHA .	1	1	-	-	-	-
Transportation .....	5	2	-	-	-	3
University of Hawaii .....	118	108	6	-	2	2
County government .....	703	451	92	-	4	156
Teachers housing 1/ .....	52	-	32	-	-	20
Other housing .....	651	451	60	-	4	136

1/ To avoid double-counting, teachers housing owned by the counties reported separately.

Source: Hawaii State Department of Business and Economic Development, survey of government agencies.

Table 9.-- HOUSING UNITS, HOUSEHOLDS, AND RESIDENT POPULATION:  
1980 TO 1986

Year	Housing units		House- holds	Resident popu- lation
	Total	Resident		
1980 .....	334,235	322,598	294,052	964,691
1986 .....	370,548	347,549	336,000	1,062,300
Percent change, 1980-1986 ...	10.9	7.7	14.3	10.1

Source: Present report, tables 1 and 3; Hawaii State Department of Business and Economic Development, The Population of Hawaii, 1980-1986 (Statistical Report 200, September 21, 1987), tables 2 and 13.